

1983  
Annual Report  
Forest Insect and Disease Conditions in  
West Virginia

to  
United States Forest Service, Morgantown, WV

Looper Complex

The looper complex in eastern panhandle of West Virginia was prevalent again in 1983. This makes the third year that the loopers have caused defoliation to hardwoods in the eastern counties (Jefferson, Berkeley, Morgan, Hampshire and Mineral). This year 35,000 acres were completely defoliated. The looper complex contains the following insects: half-winged geometer Phigalia titea, linden looper Erannis tilillaria, Fall cankerworm Alsophila pometaria, oak leaf rollers, oak leaf tiers and forest tent caterpillar Malacosoma disstria.

Populations have collapsed due to predaceous beetles Calasoma sp., Tachinid flies and other unknown parasites.

Mortality has taken place in the areas that were defoliated two years in succession. The average mortality appears to be 20%. The exact figures have not been released but should be forthcoming soon.

Gypsy Moth

A suppression project took place in 1983 in Morgan and Berkeley counties. Approximately 16,735 acres were treated with Thuricide 32LV at 12 BIU per acre. The erratic weather in May was instrumental in not achieving excellent control of Gypsy moth.

Egg mass counts during late summer early fall indicate several areas in Jefferson, Berkeley and Morgan counties need treatment in 1984.

Generally male moth catches were down on a statewide basis. Putnam county was only <sup>the</sup> new county to record <sup>a</sup> male moth catch.

Larvae of the gypsy moth were found for the first time in Grant County. (New county record).

Egg mass counts average 15,000/acre on the Blue Ridge in Jefferson County. Abatement program planned in 1984.

#### Biological Control Program

Glyapanteles flavicoxis released in the eastern panhandle.

#### Tuliptree Scale

The tuliptree scale Toumeyella liriodendri was extremely heavy this year and occurred throughout the state. Many trees had dead branches and some appeared on the verge of dying. The populations of this insect were at an all time high this year. The larvae of the lady beetle were noticed feeding on the scales in mid summer and <sup>chemical</sup> control recommendations were ~~withheld~~ not encouraged.

#### Eastern Tent Caterpillar - Malacosoma americana

Populations have collapsed in most of the State. Nests were still observed in the eastern panhandle.

#### Fall Webworm - Hyphantria cunea

Common throughout the state and extremely heavy in the northern panhandle (Brooke and Hancock counties).

#### Locust Leaf Miner - Odontota dorsalis

The locust leaf miner is becoming more widespread than in previous years. The mountainous areas and eastern half of W. Va. are heavily infested. The infestation in western and southern W. Va. have subsided somewhat.

Cherry Scallop Shell Moth - Calocolpe undulata

This insect is becoming more abundant in the mountainous area of W. Va. where it is very common on wild black cherry.

White Pine Bark Aphid

Extremely heavy on white pine in western part of W. Va.

Fall Cankerworm - Alosophila pometaria

This insect is becoming more abundant in the mountainous areas of the State, namely middle mountains in Randolph Co. Defoliation is expected in 1984 in this area.

#### Dutch Elm Disease - *Ceratocystis ulmi*

Disease incidence throughout the state was high again this year. This is undoubtedly the single most important forest and shade tree problem in the state.

#### Elm Phloem Necrosis - Elm Yellos MLO

Elm phloem necrosis was initially reported in West Virginia during the 1930's. This disease had not been reported in West Virginia since the early 1940's, until this year. During routine survey work in the Charleston area several dying elms were spotted. Close examination of the elms revealed that the trees did not have DED but were dying from phloem necrosis caused by an MLO. All the classical phloem necrosis symptoms were present.

#### Ash Branch Mortality

Ash branch mortality was observed on white ash trees in Kanawha and Cabell Counties. The dead and dying branches were heavily cankered. The fungus *Fusicoccum* sp. was readily isolated from the cankered areas. Drought conditions may have contributed to the problem. Further work will be conducted to determine if ash decline, a malady in the northeast, is in its beginning stages here.

#### Anthracnose of Hardwoods

Sycamore and white oak anthracnose incidence was moderate to severe this year. The moist conditions encountered this spring were ideal for disease incidence.

#### Bullseye Leaf Spot - *Cristulariella pyramidalis*

Bullseye leaf spot incidence was very light this year on maples, ash and other hardwoods. The dry summer conditions we experienced were not conducive to infection.

Rhizosphaera Needlecast - Rhizosphaera kalkoffi

Only two specimens of Rhizosphaera needlecast were submitted to the pest identification laboratory this year. The specimen from Randolph County was a new county record. The diseased trees suffered little damage.

Lophodermium Needlecast - Lophodermium pinastri

Lophodermium needlecast has not been a serious problem in West Virginia for many years. Only an occasional heavily infected tree is found. In recent years, disease resistant varieties of Scotch pines have been employed.

Naemacyclus Needlecast - Naemacyclus minor

Naemacyclus needlecast is a common disease in Scotch pine plantings. Several Christmas tree growers suffered significant needlecast problems due to this pathogen in 1982.

Biffusella Needlecast - Biffusella linearis

This disease was reported for the first time in West Virginia on a white pine tree in Monroe County. The fungus produces a black fruiting structure that runs nearly the entire length of the needle. Only 2nd and 3rd year needles were effected.

Hypoderma Needlecast - Hypoderma lethale

This disease was observed causing needle tip burn on pitch pine in Pocahontas County. The infected needles appear green and healthy near the base, with the remainder of the needles appearing bleached out and dead. Small black fruiting bodies develop on the bleached out portion of the diseased needles.

Cytospora Canker - Cytospora kunzei

Cytospora has been observed causing moderate damage to Norway spruces and Colorado Blue Spruces in the state. A number of speci-

mens and inquiries were submitted to the Pest Identification Laboratory this year.

Atropellis Canker - Atropellis tingens

This is a problem of Scotch pine plantings growing on poor dry sites. Infected trees take on a flagged appearance.

Pine Root Decline - Verticicladiella proceri

Pine root decline continues to be a problem in many of our white pine plantations. However, it is also known to occur in natural white pine stands. Some Christmas tree growers estimate that they lose 5% - 7% of their white pine plantings each year to this disease.

Phytoththora Root Rot - Phytophthora cinnamomi

This disease continue to be a major concern in West Virginia. It has the potential to become a widespread and serious problem on a variety of tree species. To date it is only known to occur in seven plantations in seven different counties. Presently this pathogen has been isolated from dying rhododendrons, Douglas-fir, white fir and Fraser fir.

Pinewood Nematode - Bursaphelenches xylophylus

The pinewood nematode survey has been discontinued because the nematode is now considered a native pathogen. To date the nematode has been insolated from dying conifers in 13 of West Virginia's 55 counties.

Beech Bark Disease Complex - Nectria galligena & Cryptococcus fagisuga

The forest pathologist has been assisting the USFS-S&PF with the establishment of research plots and a disease impact survey. Disease incidence was much worse than we initially



thought. Approximately 8,000 acres of dead and dying beech is now known to occur in the Monongahela National Forest.

Oak Wilt Detection - *Ceratocystis fagaccarum*

Sixteen high oak wilt disease incidence quadrangles in the eastern panhandle and 20 high incidence quadrangles in the southwestern section of West Virginia were flown during the summer. Symptomatic trees were marked on USGS quadrangle maps. Disease incidence remained the same as last year. The following low incidence counties were flown: Randolph, Barbour, Upshur, Nicholas, Pocahontas, Monongalia, Preston, Marion, Taylor and Harrison. Suspect trees were spotted in Harrison and Barbour counties. Ground crews investigated and took samples. Positive cultures were obtained from the Harrison county spot. Since at least one active oak wilt center occurs in Harrison County no further effort will be made to clear that county for the exportation of oak veneer logs to Europe.

Oak wilt has never been found in Brooke, Ohio, Webster and Tucker counties. Aerial surveillance is maintained over these counties to insure that they remain free of oak wilt. No spots were detected in these counties this year.